

REMARKS/ARGUMENTS

Claims 18-30 are pending and under consideration in the above-identified application.. No claims have been amended in the present response. Applicants respectfully request reconsideration of the pending claims in light of the remarks below.

Rejections under 35 U.S.C. § 102

Claims 18, 19 and 22 remain rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. 5,338,686 (Hellerstein). This rejection has been maintained essentially for reasons made of record in the prior office action mailed June 27, 2007.

As discussed in previous office actions, the Examiner alleges that Hellerstein teaches the method steps as presented in claims 18, 19 and 22. As mentioned by Applicants and in Hellerstein, the Examiner notes that in both methods samples are taken from a biopolymer subunit pool. The Examiner notes that Applicants are arguing that the molar excess is calculated based on isotopomeric species, but again the Examiner does not see any difference between the method taught in Hellerstein and the instant application. In Hellerstein, the Examiner summarizes the method as including steps wherein samples are taken from a pool, the relative abundance of monoisotopic and isotopomeric peaks using mass spectrometry are measured, the difference between the peaks of the first and second samples are calculated, and the rate of biopolymer decay is determined. In addition, the Examiner alleges that even if isotopomer species are used, there is nothing in the instant claims to prevent the first sample of the biopolymer pool to encompass an isotopomer species. The Examiner concludes that the instant claims are broad, and that the method in Hellerstein reads on them.

Applicants' representative wishes to thank Examiner Joike and Primary Examiner Vogel for the courtesy of the interview conducted July 31, 2008 to discuss the differences between the cited Hellerstein reference and present invention. Applicants' representative also wish the thank Examiner Joike for the subsequent interview held August 6, 2008. In the

interview Applicants noted that the present invention as claimed includes in steps c) and e) measuring the relative abundance of monoisotopic and isotopomeric peaks in the first (step c) and the second (step e) samples. The relative abundance in the claimed method includes summing the peaks heights measured for all the monoisotopic and the isotopomeric peaks in each of steps c) and e).

Hellerstein on the other hand states, for example at column 6, lines 64-68, “[a]s will be appreciated from the ensuing discussion, the isotopomers analyzed will contain at least one mass isotopically labeled subunit, and, for purposes of comparison, it is convenient to express the mass spectral peak heights as ratios”. In addition, at column 7, lines 16-29, Hellerstein use instead of the monoisotopic and isotopomeric peaks, the isotopomer peak height ratio as expressed as a percentage total isotopomer content of the sample. As such the monoisotopic peak is not used in analyzing or calculating the molar excess.

Applicants noted in the interview that Figures 3A through 3C of the present invention demonstrate why the monoisotopic peak, or M_0 , is not used in the method of Hellerstein. In particular, the Figure 3 depicts data from the method of the present invention as used in calculating the rate of biopolymer synthesis, but calculating the rate of degradation would basically be the reverse. The monoisotopic peak, M_0 , is the first peak in each of Figures 3A, 3B, and 3C. When stable isotope is included in the calculation the size of monoisotopic peak relative to the size of the isotopomeric peaks becomes smaller while the relative size of each isotopomeric peak becomes larger. With time, the relative size of the monoisotopic peak becomes smaller and the size of each isotopomeric peak becomes larger. As such, the effect of the increase, or decrease, in to amount of the monoisotopic peak is in the opposite direction as that of the isotopomeric peaks and this effect would alter the calculations of Hellerstein. Therefore, the claims as pending in the present application can not be considered so broad as to include the methods disclosed by Hellerstein.

Examiner Joike in the telephone interview conducted August 6, 2008 confirmed reviewing the disclosure of Hellerstein and determining that the methods as currently claimed would not be considered to encompass the method described by Hellerstein. Examiner Joike also requested that this written response be filed. Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 18, 19 and 22 under 35 U.S.C. § 102(b) as being anticipated by U.S. 5,338,686 (Hellerstein) in view of the discussions during the September 31 and August 6, 2008 interviews and the above remarks.

Allowable Subject Matter

Claims 20, 21 and 23-30 remain objected as being dependent upon a rejected base claim, but are considered allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. Applicants believe that in view of the above remarks the rejected base claims have been demonstrated to be unanticipated over the cited art and are allowable. As such, Applicants do not believe that claims 20, 21, and 23-30 require being rewritten.

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Amdt. dated September 25, 2008
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 1636

PATENT

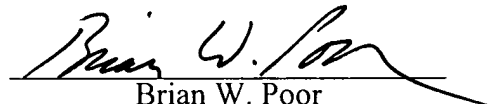
CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 206-467-9600.

Respectfully submitted,

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